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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,671	06/14/2001	Tuija Hurttä	P-279233	5978
909	7590	12/28/2004	EXAMINER	
PILLSBURY WINTHROP, LLP			FERRIS, DERRICK W	
P.O. BOX 10500			ART UNIT	
MCLEAN, VA 22102			PAPER NUMBER	
			2663	

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/787,671

Applicant(s)

HURTTA, TUIJA

Examiner

Derrick W. Ferris

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2001.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-11 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 14 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/21/2001.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,137,791 A to *Frid et al.* ("*Frid*") in view of "Mobile IP" to *Perkins*.

As such to **claim 1**, see figure 3 of *Frid* where HA 320 is the Home Agent/gateway support node. In particular, note that HA 320 is *directly* connect to FA/SR 310 such that there is no GCSN between them (i.e., in reference to applicant's figure 1). As such, HA performs the function of at least one gateway support node configured to route data packets at least one of to and from the least mobile station e.g., at column 7, lines 5-20 since HA performs a routing functionality. Examiner also notes that an extension for mobility management is taught since the IP packet encapsulated is used, see e.g., column 7, lines 22-33. However, assuming the above limitation is not clear from the reference then the examiner also notes the following obviousness rejection.

Perkins teaches the further recited limitation above at e.g., at left-hand column first full paragraph at page 85 and figure 7 on page 93 since the care-of-address is used as the end-point in the IP tunnel such that this address is the extension. *Perkins* also teaches combining the HA with a router, see e.g., right-hand column on page 93 and figure 9b on page 94.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Frid* by clarifying IP-to-IP encapsulation. In other words, the protocol stack used for routing data packets (i.e., datagrams) at the HA is streamlined by routing data packets “directly” using a network layer (i.e., layer 3) such that increased throughput and/or lighter overhead due to a smaller protocol stack is used since a GTP header is not used. Instead the HA intercepts datagrams addressed to the mobile station, encapsulates them, and sends them to the mobile stations COA. In particular, the same process as described in applicant’s specification at page 7, lines 11-16 is taught by both *Perkins* and *Frid* with respect to supplementing the Internet protocol-type protocol with an extension for mobility management of the at least one mobile station.

As such, examiner notes that it would have been obvious to one skilled in the art prior to applicant’s invention to include the above limitation. In particular, the motivation for modifying the reference or to combine the reference teachings would be to clarify how IP encapsulation is performed at an IP layer (i.e., network layer). In particular, *Perkins* cures the above-cited deficiency by providing a motivation found at e.g., left-hand column at page 86 and figure 7 on page 93. Second, there would be a reasonable expectation of success since both references teach IP mobility. Thus the references either in singular or in combination teach the above claim limitation(s).

As to **claim 2**, a layer one protocol and a layer two protocol are inherently taught as part of an IP packet since encapsulation is used, e.g., a packet encapsulated at OSI layer 3 is encapsulated at the lower layers which includes a physical and data link

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protocol. The network layer is the IP layer where the extension is e.g., the COA using IP-to-IP encapsulation.

As to **claim 3**, the packet is routed at the IP layer such that the IP layer and below are used to route the packet, see e.g., the section for Routing and Tunneling at page 92 of *Perkins*.

As to **claims 4-6**, *Frid* teaches that the Foreign Agent is combined with the serving router, see e.g., column 7, lines 5-20. As such, the serving router serves as a support node which is configured as either a serving support node or a gateway support node depending on the circumstance of the call, e.g., in a handoff the FA/SR acts as a gateway.

As to **claim 7**, see similar rejection to claim 1.

As to **claims 8-9**, see similar rejection to claims 4-5.

As to **claims 10-11**, see similar rejection to claim 1. Also note that the HA servers as a gateway, see e.g., column 7, lines 5-20 of *Frid*.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


DWF

Derrick W. Ferris
Examiner
Art Unit 2663


Derrick W. Ferris
12/21/2007